What is claimed is:

1.   A method comprising:

receiving input to open a data file having a solution;

discovering, without user interaction, the solution;

deploying, without user interaction, the solution;

displaying, by opening the data file with the solution, an electronic form having operable fields; and

enabling a user to enter data into the operable fields of the electronic form, wherein the solution defines the availability of one or more actions to the user when entering the data into each said operable field of the electronic form.

2.   The method as defined in Claim 1, further comprising:

receiving data entered into the operable fields of the electronic form; and

altering the data in the data file so as to correspondingly reflect the data received.

3.   The method as defined in Claim 1, wherein the availability of one or more actions to the user concurs with an event elected from the group consisting of:

an association of an input device being used by the user with one said operable field;

a cursor position corresponding to an input device being used by the user is proximal to one said operable field;

one said operable field is selected by the user by use of an input device;

one said operable field on the electronic form is made to be an active field by operation of an input device being used by the user;

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specific conditions are met;

specific conditions are met with respect to the data in the one said operable field;

when the user's mouse pointer for an input device rests over, within, or proximal to an editable region of one said operable field;

when the user's mouse pointer for an input device rests over, within, or proximal to an editable region of one said operable field and the mouse is clicked one or more times.

4.   The method as defined in Claim 1, wherein each said action is selected from the group consisting of:

a request for one or more of a display of a menu and an activation of a menu item of a menu;

a request for one or more of a display of a tool bar and an activation of a command tool of a tool bar;

an editing operation with respect to data in at least one said operable field that is one or more of an undo function, a redo function, a copy function, a cut function, a paste function, an insertion of a hyperlink, and a carriage return or line feed function;

performing a character formatting operation with respect to data in at least one said operable field that is one or more of a boldface, an italics, an underlining, a change of font size or font color, character spacing, and text effects; and

adding, entering, updating or deleting, with respect to at least one said operable field, one or more of a repeating operable field, an optional operable field, a spreadsheet, a table, a row or a column in a table, a text box, multiple spaces, a header, a footer, an image, a graphic, a picture, a link to an image, a link to a graphic, a link to a picture,

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single line plain text, multi-line plain text, single line formatted text, multi-line formatted text, rich text, a whole number, a decimal, a true/false distinction, a date, and a time.

5. The method as defined in Claim 1, wherein the availability of each said action is determined on the basis of the context of each said operable field of the electronic form with respect to at least one other said operable field of the electronic form.

6. The method as defined in Claim 1, wherein discovering the solution includes discovering a solution identifier in the data file, computing a special name from the solution identifier, and discovering the solution using the special name.

7. The method as defined in Claim 1, wherein the data file includes primarily data.

8. The method as defined in Claim 1, wherein the data file is written in XML.

9. The method as defined in Claim 1, wherein:

the solution includes a presentation application that includes the electronic form; and

the presentation file contains logic to gives the display of the electronic form a graphical, visual representation of the operable fields.

10.   The method as defined in Claim 9, wherein the presentation application is written in XSLT.

11.   The method as defined in Claim 1, wherein the solution includes a logic application for ensuring the validity of the received data that is entered into the operable fields of the electronic form.

12.   The method as defined in Claim 11, wherein the logic application includes an XML schema.

13.   The method as defined in Claim 1, wherein the electronic form is written in XHTML.

14.   A computer-readable medium comprising computer-executable instructions that perform the method as defined in Claim 1 when executed by a computer.

15.   A method comprising:

displaying an electronic form containing operable fields corresponding to one or more components that correspond to one or more nodes in a tree arrangement of hierarchical data, each said node having a structure, wherein:

the operable fields have a hierarchical arrangement in the display of the electronic form; and

the hierarchical arrangement of the operable fields in the electronic form visually mimics:

the one or more nodes in the tree arrangement of hierarchical data; and

the structure of each said node;

enabling a user to enter data into the operable fields of the electronic form;

receiving data entered into the operable fields of the electronic form, wherein each said node has an attribute associated therewith that defines the availability of one or more actions to the user when the user enters the data into each said operable field of the electronic form; and

altering the hierarchical data in a data file so as to correspondingly reflect the data received.

16. The method as defined in Claim 15, wherein the availability of one or more actions to the user concurs with an event elected from the group consisting of:

an association of an input device being used by the user with one said operable field;

a cursor position corresponding to an input device being used by the user is proximal to one said operable field;

one said operable field is selected by the user by use of an input device;

one said operable field on the electronic form is made to be an active field by operation of an input device being used by the user;

specific conditions are met;

specific conditions are met with respect to the data in the one said operable field;

when the user's mouse pointer for an input device rests over, within, or proximal to an editable region of one said operable field;

when the user's mouse pointer for an input device rests over, within, or proximal to an editable region of one said operable field and the mouse is clicked one or more times.

17. The method as defined in Claim 15, wherein each said action is selected from the group consisting of:

displaying a menu containing one or more menu items with the electronic form;

displaying a toolbar containing one or more command tools with the electronic form;

selecting a menu item from a menu that is displayed with the electronic form;

selecting a command tool from a tool bar that is displayed with the electronic form;

an editing operation with respect to data in at least one said operable field that is one or more of an undo function, a redo function, a copy function, a cut function, a paste function, an insertion of a hyperlink, and a carriage return or line feed function;

performing a character formatting operation with respect to data in at least one said operable field that is one or more of a boldface, an italics, an underlining, a change of font size or font color, character spacing, and text effects; and

adding, entering, updating or deleting, with respect to at least one said operable field, one or more of a repeating operable field, an optional operable field, a spreadsheet, a table, a row or a column in a table, a text box, multiple

spaces, a header, a footer, an image, a graphic, a picture, a link to an image, a link to a graphic, a link to a picture, single line plain text, multi-line plain text, single line formatted text, multi-line formatted text, rich text, a whole number, a decimal, a true/false distinction, a date, and a time.

18.   The method as defined in Claim 15, wherein the displaying further comprises creating the electronic form using an XSLT document.

19.   The method as defined in Claim 18, wherein:

the XSLT document is a compilation of the components; and

the components are XSLT components.

20.   The method as defined in Claim 15, wherein the tree arrangement of hierarchical data is part of a generalized instance.

21.   The method as defined in Claim 20, where the generalized instance includes all possible instances for each node of the tree arrangement of hierarchical data.

22.   A computer-readable medium comprising computer-executable instructions that perform the method as defined in Claim 15, when executed by a computer.

23. A method comprising:

receiving an instruction to open a markup-language document having a solution identifier;

computing a special name using the solution identifier;

discovering a solution using the special name;

opening the markup-language document with the solution, wherein:

the solution includes a presentation application and a markup-language schema;

the markup-language document can be inferred from the markup-language schema; and

portions of the markup-language document are logically coupled with fragments of the markup-language schema;

executing the presentation application to render an electronic form containing data-entry fields associated with the coupled portions;

enabling a user to enter data into the data-entry fields of the electronic form, wherein at least one of the presentation application and the mark-up language schema define the availability of one or more actions that are made available to the user when entering the data into each said data-entry field of the electronic form;

receiving data entered into the data-entry fields of the electronic form; and

altering hierarchical data in the markup-language document so as to correspondingly reflect the data received.

24. The method as defined in Claim 23, wherein:

the markup-language document is written in XML;

the presentation application is written in XSLT;

the electronic form is written in XHTML; and

the solution further comprises a manifest of all files that can be used for:

representing the markup-language document in the electronic form;

allowing a user in input data into the one or more data-entry fields; and

validating the data that the user inputs into the one or more data-entry

fields.

25. The method as defined in Claim 23, wherein the coupled portions contain information setting forth all possible markup-language documents for the coupled portions.

26. The method as defined in 23, wherein the data-entry fields of the electronic form map to a corresponding plurality of nodes of the markup-language document; and

the method further comprises:

receiving, through one or more said data-entry fields, data input by a user for storage in a corresponding said node in the markup-language document; and

outputting data in the markup-language for viewing by the user in the electronic form through the data-entry fields via the mapping of the data-entry fields from corresponding said nodes of the markup-language document.

27. The method as defined in Claim 26, wherein:

the markup-language schema includes a logic application; and

the method further comprises:

executing the logic application to perform a validation to determine if the data received by input from the user is valid or invalid; and

when the validation determines that the data received by input from the user is invalid, outputting a dialog box bearing indicia informing the user that the data input is invalid.

28. The method as defined in Claim 27, wherein:

the validation is performed on the data received by input from the user into each said data-entry field with a validation rule;

the logic application comprises a plurality of the validation rules for:

a corresponding plurality of the nodes in the markup-language document; and

a corresponding plurality of the data-entry fields;

the validation uses each said validation rule to:

determine if the data received by input from the user into a corresponding said data-entry field is valid or invalid; and

require the user to correct any data input into the corresponding said data-entry field that the validation determines to be invalid.

29. The method as defined in Claim 28, wherein each said validation rule is at least one of:

based on a part of a schema governing a corresponding said node;

written in script and associated with a corresponding said node; and

written in a declarative syntax and associated with a corresponding said node.

30. The method as defined in Claim 28, wherein:

each said validation rule includes an alert area display; and

the validation further comprises using one said validation rule to determine that the data received by input from the user into a corresponding said data-entry field is invalid and outputting the corresponding alert area display so as to be associated with the corresponding said data-entry field.

31. The method as defined in Claim 30, wherein when the alert area display is output, the output includes one or more characteristics selected from the group consisting of:

graphics surrounding the corresponding said data-entry field;

the alert area display surrounds the corresponding said data-entry field;

the alert area display includes graphics containing a red, dashed-lined box;

the alert area display includes graphics highlighting the data in the corresponding said data-entry field;

the alert area display surrounds the corresponding said data-entry field and includes the graphics containing a squiggly line beneath the data in the corresponding said data-entry field;

the alert area display includes text containing information about the invalid data in the corresponding said data-entry field;

the alert area display includes text containing information about the corresponding said data-entry field; and

the alert area display includes a pop-up window.

32.   The method as defined in Claim 28, wherein each said node has one or more of the validation rules associated therewith.

33.   The method as defined in Claim 28, wherein one said validation rule includes a requirement that the data received by input from the user into a corresponding said data-entry field is to be is at least one of:

within a certain range;

within a certain range of text or numerals for a setting of one or more bounds of the certain range;

numerical;

textual; and

a reference to another said node in the data file.

34.   The method as defined in Claim 28, wherein the plurality of the validation rules are associated by mapping to the corresponding plurality of the nodes in the data file.

35. The method as defined in Claim 28, wherein each said validation rule is at least one of:

associated by mapping to a corresponding said data-entry field by an XPath expression; and

associated by mapping to a corresponding said data-entry field by use of a declarative syntax.

36. The method as defined in Claim 28, wherein each said validation rule is script-based.

37. The method as defined in Claim 36, wherein the script-based validation rule maps to a corresponding said node with at least one of:

an XPath expression;

an event handler;

an event handler that determines when a real-time validation tool uses the script-based validation rule;

an event handler that determines when a real-time validation tool uses the script-based validation rule before data received for the node is held by the data file; and

an event handler that determines when a real-time validation tool uses the script-based validation rule after data received for the node is held by the data file.

38. The method as defined in Claim 28, wherein each said validation rule includes:

an alert area display; and

how the alert area display is to appear when output.

39. A computer-readable medium comprising instruction that, when executed by a computer, performs the method as defined in Claim 23.

40. A computer-readable medium comprising computer-executable instructions that perform the following when executed by a computer:

enabling a user to input data into a first node of a hierarchical data file;

changing the hierarchical data file by retaining the data in the first node of the hierarchical data file;

applying a transformation file on the changed hierarchical data file; and

enabling the user to input data into a second node of the hierarchical data file, wherein each of the first and second nodes have an attribute associated therewith that respectively defines the availability of one or more actions to the user when inputting the data into the first and second nodes of the hierarchical data file.

41. The computer-readable medium as defined in Claim 40, wherein the availability of one or more actions to the user concurs with an event elected from the group consisting of:

an association of an input device being used by the user with at least one of the first and second nodes of the hierarchical data file;

a cursor position corresponding to an input device being used by the user is proximal to at least one of the first and second nodes of the hierarchical data file;

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at least one of the first and second nodes of the hierarchical data file is selected by the user by use of an input device;

at least one of the first and second nodes of the hierarchical data file is made to be an active field by operation of an input device being used by the user;

specific conditions are met;

specific conditions are met with respect to the data in at least one of the first and second nodes of the hierarchical data file;

when the user's mouse pointer for an input device rests over, within, or proximal to an editable region of at least one of the first and second nodes of the hierarchical data file;

when the user's mouse pointer for an input device rests over, within, or proximal to an editable region of at least one of the first and second nodes of the hierarchical data file and the mouse is clicked one or more times.

42.	The computer-readable medium as defined in Claim 40, wherein each said action is selected from the group consisting of:

displaying a menu containing one or more menu items;

displaying a toolbar containing one or more command tools;

selecting a menu item from a menu that is displayed;

selecting a command tool from a tool bar that is displayed;

an editing operation with respect to data in at least one of the first and second nodes that is one or more of an undo function, a redo function, a copy function, a cut function, a paste function, an insertion of a hyperlink, and a carriage return or line feed function;

performing a character formatting operation with respect to data in at least one of the first and second nodes that is one or more of a boldface, an italics, an underlining, a change of font size or font color, character spacing, and text effects; and

adding, entering, updating or deleting, with respect to at least one of the first and second nodes, one or more of a repeating data-entry field, an optional data-entry field, a spreadsheet, a table, a row or a column in a table, a text box, multiple spaces, a header, a footer, an image, a graphic, a picture, a link to an image, a link to a graphic, a link to a picture, single line plain text, multi-line plain text, single line formatted text, multi-line formatted text, rich text, a whole number, a decimal, a true/false distinction, a date, and a time.

43.   The computer-readable medium as defined in Claim 40, wherein the applying is performed on only a portion of the changed hierarchical data file.

44.   The computer-readable medium as defined in Claim 40, wherein the applying is performed prior to the enabling the user to input data into the second node.

45.   The computer-readable medium as defined in Claim 40, wherein the hierarchical data file is written in XML and the transformation file is written in XSLT.

46.   The computer-readable medium as defined in Claim 40, wherein the applying produces a rendering file.

47. The computer-readable medium as defined in Claim 46, further comprising computer-executable instructions that, when executed by the computer, render the rendering file to produce a rendered form having first and second data-entry fields respectively corresponding to the first node and the second node.

48. The computer-readable medium as defined in Claim 46, further comprising computer-executable instructions that, when executed by the computer, render the partial rendering file to produce a partial rendered form having a first data-entry field corresponding to the first node.

49. The computer-readable medium as defined in Claim 46, further comprising computer-executable instructions that, when executed by the computer, render the partial rendering file to produce a partial rendered form that represents the change made to the hierarchical data file.

50. The computer-readable medium claim 40, wherein:

the applying produces a partial rendering file written in XSLT: and

the computer-readable medium further comprises computer-executable instructions that, when executed by the computer, render the partial rendering file to produce a partial rendered form written in XHTML that represents the change made to the hierarchical data file.

51.   A computer-readable medium storing computer-executable instructions that, when executed by a computing device, perform acts comprising:

displaying an electronic form containing one or more data-entry fields that correspond to one or more nodes in a tree arrangement of hierarchical data, wherein the data-entry fields can be edited by an end user; and

enabling the user to enter data into the data-entry fields of the electronic form, wherein each said node has an attribute associated therewith that defines the availability of one or more actions to the user when the user enters the data into each said data-entry field of the electronic form.

52.   The computer-readable medium as defined in Claim 51, further comprising computer-executable instructions that, when executed by the computer:

receiving data entered into the data-entry fields of the electronic form; and

altering the data file to reflect the data received.

53.   The computer-readable medium as defined in Claim 51, wherein the displaying further comprises creating the electronic form using an XSLT file.

54.   The computer-readable medium as defined in Claim 53, wherein the XSLT file includes XSLT components.

55. The computer-readable medium as defined in Claim 51, wherein the availability of one or more actions to the user concurs with an event elected from the group consisting of:

an association of an input device being used by the user with one said data-entry field on the electronic form;

a cursor position corresponding to an input device being used by the user is proximal to one said data-entry field on the electronic form;

one said data-entry field on the electronic form is selected by the user by use of an input device;

one said data-entry field on the electronic form is made to be an active field by operation of an input device being used by the user;

specific conditions are met;

specific conditions are met with respect to the data in the one said data-entry field on the electronic form;

when the user's mouse pointer for an input device rests over, within, or proximal to an editable region of one said data-entry field on the electronic form;

when the user's mouse pointer for an input device rests over, within, or proximal to an editable region of one said data-entry field on the electronic form and the mouse is clicked one or more times.

56. The computer-readable medium as defined in Claim 51, wherein each said action is selected from the group consisting of:

displaying a menu containing one or more menu items with the electronic form;

displaying a toolbar containing one or more command tools with the electronic form;

selecting a menu item from a menu that is displayed with the electronic form;

selecting a command tool from a tool bar that is displayed with the electronic form;

an editing operation with respect to data in at least one said data-entry field on the electronic form that is one or more of an undo function, a redo function, a copy function, a cut function, a paste function, an insertion of a hyperlink, and a carriage return or line feed function;

performing a character formatting operation with respect to data in at least one said data-entry field on the electronic form that is one or more of a boldface, an italics, an underlining, a change of font size or font color, character spacing, and text effects; and

adding, entering, updating or deleting, with respect to at least one said data-entry field on the electronic form, one or more of a repeating data-entry field, an optional data-entry field, a spreadsheet, a table, a row or a column in a table, a text box, multiple spaces, a header, a footer, an image, a graphic, a picture, a link to an image, a link to a graphic, a link to a picture, single line plain text, multi-line plain text, single line formatted text, multi-line formatted text, rich text, a whole number, a decimal, a true/false distinction, a date, and a time.

57.   An apparatus comprising:

means for enabling a user to input data into a first node of a hierarchical data file;

means for storing the data in the first node of the hierarchical data file;

means for changing the hierarchical data file by applying a transformation file on the hierarchical data file containing the data;

means for viewing the change in the hierarchical data file in an electronic form;

means for enabling the user to input data into a second node of the hierarchical data file; and

means, respectively associated with the first and second nodes, for defining the availability of one or more actions to the user when the user inputs the data into the first and second nodes of the hierarchical data file.

58.   The apparatus as defined in Claim 57, wherein the availability of one or more actions to the user concurs with an event elected from the group consisting of:

an association of an input device being used by the user with at least one of the first and second nodes;

a cursor position of an input device being used by the user is correspondingly proximal to at least one of the first and second nodes;

at least one of the first and second nodes is correspondingly selected by the user by use of an input device;

at least one of the first and second nodes is made to be an active field by a cursor position corresponding to an input device being used by the user;

specific conditions are met;

specific conditions are met with respect to the data in at least one of the first and second nodes;

when the user's mouse pointer for an input device rests over, within, or proximal to an editable region that corresponds to at least one of the first and second nodes;

when the user's mouse pointer for an input device rests over, within, or proximal to an editable region that corresponds to at least one of the first and second nodes and the mouse is clicked one or more times.

59. The apparatus as defined in Claim 57, wherein each said action is selected from the group consisting of:

displaying a menu containing one or more menu items;

displaying a toolbar containing one or more command tools;

selecting a menu item from a menu that is displayed;

selecting a command tool from a tool bar that is displayed;

an editing operation with respect to data in at least one of the first and second nodes, wherein the editing operation is one or more of an undo function, a redo function, a copy function, a cut function, a paste function, an insertion of a hyperlink, and a carriage return or line feed function;

performing a character formatting operation with respect to data in at least one of the first and second nodes, wherein the character formatting operation is one or more of a boldface, an italics, an underlining, a change of font size or font color, character spacing, and text effects; and

adding, entering, updating or deleting, with respect to at least one of the first and second nodes, one or more of a repeating data-entry field, an optional

data-entry field, a spreadsheet, a table, a row or a column in a table, a text box, multiple spaces, a header, a footer, an image, a graphic, a picture, a link to an image, a link to a graphic, a link to a picture, single line plain text, multi-line plain text, single line formatted text, multi-line formatted text, rich text, a whole number, a decimal, a true/false distinction, a date, and a time.

60. An apparatus comprising:

means for displaying an electronic form with data-entry fields associated with nodes of a hierarchical data file;

means for enabling a user to input data into a first data-entry field of the data-entry fields;

means for receiving data input into the first data-entry field;

means for validating the data in the first data-entry field to determine if the data is valid or invalid;

means for enabling the user to input data into a second data-entry field of the data-entry fields if the data in the first data-entry field is valid, or else alerting the user if the data in the first data-entry field is invalid; and

means, respectively associated with the first and second nodes, for defining:

the availability of one or more actions to the user when the user inputs the data into the first and second data-entry fields of the data-entry fields; and

the validity of the data input into the first and second data-entry fields of the data-entry fields.

61. The apparatus as defined in Claim 60, wherein the availability of one or more actions to the user concurs with an event elected from the group consisting of:

an association of said data-entry field with means, used by the user, for making input;

a cursor position corresponding to the means for making input that is proximal to at least one said data-entry field;

at least one said data-entry field is selected by the user by use of the means for making input;

at least one said data-entry field is made to be an active field by operation of the means for making input being used by the user;

specific conditions are met;

specific conditions are met with respect to the data in at least one said data-entry field;

when the user's mouse pointer for the means for making input rests over, within, or proximal to an editable region of at least one said data-entry field;

when the user's mouse pointer for the means for making input rests over, within, or proximal to an editable region of at least one said data-entry field and the mouse is clicked one or more times.

62. The apparatus as defined in Claim 60, wherein each said action is selected from the group consisting of:

displaying a menu containing one or more menu items with the electronic form;

displaying a toolbar containing one or more command tools with the electronic form;

selecting a menu item from a menu that is displayed with the electronic form;

selecting a command tool from a tool bar that is displayed with the electronic form;

an editing operation with respect to data in at least one said data-entry field that is one or more of an undo function, a redo function, a copy function, a cut function, a paste function, an insertion of a hyperlink, and a carriage return or line feed function;

performing a character formatting operation with respect to data in at least one said data-entry field that is one or more of a boldface, an italics, an underlining, a change of font size or font color, character spacing, and text effects; and

adding, entering, updating or deleting, with respect to at least one said data-entry field, one or more of a repeating data-entry field, an optional data-entry field, a spreadsheet, a table, a row or a column in a table, a text box, multiple spaces, a header, a footer, an image, a graphic, a picture, a link to an image, a link to a graphic, a link to a picture, single line plain text, multi-line plain text, single line formatted text, multi-line formatted text, rich text, a whole number, a decimal, a true/false distinction, a date, and a time.

63.   An apparatus comprising:

means for displaying a representation of a data file;

means for selecting the data file;

means for discovering and deploying, without user interaction, a solution application governing the data file;

means for displaying an electronic form representing a product of the solution application and the data file;

means for enabling a user to enter data into the electronic form;

means, within or referred to by the solution, for defining the availability of one or more actions to the user when entering the data into the electronic form;

means for receiving data entered into the electronic form; and

means for altering the data file to reflect the data received.

64.   The apparatus as defined in Claim 63, wherein the availability of one or more actions to the user concurs with an event elected from the group consisting of:

an association a data-entry field on the electronic form with means, used by the user, for making input;

a cursor position corresponding to a data-entry field on the electronic form with means, used by the user, for making input;

a data-entry field on the electronic form is selected by the user by use of the means for making input;

at least one data-entry field on the electronic form is made to be an active field by operation of the means for making input being used by the user;

specific conditions are met;

specific conditions are met with respect to data in at least one data-entry field on the electronic form;

when the user's mouse pointer for the means for making input rests over, within,

or proximal to an editable region of at least one data-entry field on the electronic form;

when the user's mouse pointer for the means for making input device rests over,

within, or proximal to an editable region of at least one data-entry field on the electronic

form and the mouse is clicked one or more times.

65.   The apparatus as defined in Claim 63, wherein each said action is selected

from the group consisting of:

displaying a menu containing one or more menu items with the electronic

form;

displaying a toolbar containing one or more command tools with the

electronic form;

selecting a menu item from a menu that is displayed with the electronic

form;

selecting a command tool from a tool bar that is displayed with the

electronic form;

an editing operation with respect to data in a data-entry field in the

electronic form that is one or more of an undo function, a redo function, a copy

function, a cut function, a paste function, an insertion of a hyperlink, and a

carriage return or line feed function;

performing a character formatting operation with respect to data in a data-

entry field in the electronic form that is one or more of a boldface, an italics, an

underlining, a change of font size or font color, character spacing, and text effects;

and

adding, entering, updating or deleting, with respect to a data-entry field in the electronic form, one or more of a repeating data-entry field, an optional data-entry field, a spreadsheet, a table, a row or a column in a table, a text box, multiple spaces, a header, a footer, an image, a graphic, a picture, a link to an image, a link to a graphic, a link to a picture, single line plain text, multi-line plain text, single line formatted text, multi-line formatted text, rich text, a whole number, a decimal, a true/false distinction, a date, and a time.

66.   A system comprising:

a computer having a display;

a user interface executable on the computer and configured to:

display in the display a rendered form containing a data-entry field mapped to a node of a hierarchical data file; and

receive data input into the data-entry field, wherein the node of the hierarchical data file has an attribute associated therewith that defines the availability of one or more actions to a user when inputting the data into the data-entry field;

a user-input device facilitating the user's input of data into the data-entry field, and

an electronic forms application executable on the computer and configured to update the rendered form to reflect a change in the hierarchical data file through data received in the data-entry field.

67. The system as defined in Claim 66, wherein the availability of one or more actions to the user concurs with an event elected from the group consisting of:

an association of the data-entry field on the rendered form with an input device;

a cursor position corresponding to the data-entry field on the rendered form with the input device;

the data-entry field on the rendered form is selected by the user by use of the input device;

the data-entry field on the rendered form is made to be an active field by operation of the input device;

specific conditions are met;

specific conditions are met with respect to data in the data-entry field on the rendered form;

when the user's mouse pointer for the input device rests over, within, or proximal to an editable region of the data-entry field on the rendered form;

when the user's mouse pointer for the input device rests over, within, or proximal to an editable region of the data-entry field on the rendered form and the mouse is clicked one or more times.

68. The system as defined in Claim 66, wherein each said action is selected from the group consisting of:

displaying a menu containing one or more menu items with the rendered form;

displaying a toolbar containing one or more command tools with the rendered form;

selecting a menu item from a menu that is displayed with the rendered form;

selecting a command tool from a tool bar that is displayed with the rendered form;

an editing operation with respect to data in the data-entry field on the rendered form that is one or more of an undo function, a redo function, a copy function, a cut function, a paste function, an insertion of a hyperlink, and a carriage return or line feed function;

performing a character formatting operation with respect to data in the data-entry field on the rendered form that is one or more of a boldface, an italics, an underlining, a change of font size or font color, character spacing, and text effects; and

adding, entering, updating or deleting, with respect to the data-entry field in the rendered form, one or more of a repeating data-entry field, an optional data-entry field, a spreadsheet, a table, a row or a column in a table, a text box, multiple spaces, a header, a footer, an image, a graphic, a picture, a link to an image, a link to a graphic, a link to a picture, single line plain text, multi-line plain text, single line formatted text, multi-line formatted text, rich text, a whole number, a decimal, a true/false distinction, a date, and a time.

69.   A system comprising:

a computer having a display;

a user interface executable on the computer and configured to:

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display in the display an electronic form containing a data-entry field mapped to a node of a hierarchical data file; and

receive data input into the data-entry field;

a user-input device facilitating a user's input of data into the data-entry field, and

an electronic forms application executable on the computer and configured to perform operations, in real-time, with respect to the data-entry field, wherein:

the node of the hierarchical data file has an attribute associated therewith that defines the availability to the user of one or more actions when the user enters the data into the data-entry field; and

the operations include making the one of more actions available to the user when the user enters the data into the data-entry field.

70. The system as defined in Claim 69, wherein the availability of one or more actions to the user concurs with an event elected from the group consisting of:

an association of the data-entry field on the electronic form with an input device;

a cursor position corresponding to the data-entry field on the electronic form with the input device;

the data-entry field on the electronic form is selected by the user by use of the input device;

the data-entry field on the electronic form is made to be an active field by operation of the input device;

specific conditions are met;

specific conditions are met with respect to data in the data-entry field on the electronic form;

when the user's mouse pointer for the input device rests over, within, or proximal to an editable region of the data-entry field on the electronic form;

when the user's mouse pointer for the input device rests over, within, or proximal to an editable region of the data-entry field on the electronic form and the mouse is clicked one or more times.

71.   The system as defined in Claim 69, wherein each said action is selected from the group consisting of:

displaying a menu containing one or more menu items with the electronic form;

displaying a toolbar containing one or more command tools with the electronic form;

selecting a menu item from a menu that is displayed with the electronic form;

selecting a command tool from a tool bar that is displayed with the electronic form;

an editing operation with respect to data in the data-entry field on the electronic form that is one or more of an undo function, a redo function, a copy function, a cut function, a paste function, an insertion of a hyperlink, and a carriage return or line feed function;

performing a character formatting operation with respect to data in the data-entry field on the electronic form that is one or more of a boldface, an italics, an underlining, a change of font size or font color, character spacing, and text effects; and

adding, entering, updating or deleting, with respect to the data-entry field

in the electronic form, one or more of a repeating data-entry field, an optional

data-entry field, a spreadsheet, a table, a row or a column in a table, a text box,

multiple spaces, a header, a footer, an image, a graphic, a picture, a link to an

image, a link to a graphic, a link to a picture, single line plain text, multi-line plain

text, single line formatted text, multi-line formatted text, rich text, a whole

number, a decimal, a true/false distinction, a date, and a time.

72. The system as defined in Claim 69, wherein:

the attribute further defines one or more validation rules; and

the operations further comprise validating the data input into the data-

entry field against the one or more validation rules.

73. A user interface comprising:

a rendered form containing a data-entry field mapped to a node of a hierarchical

data file;

an interface to enable a user to input data into the data-entry field, wherein the

node of the hierarchical data file has an attribute associated therewith that defines the

availability of one or more actions to the user when inputting the data into the data-entry

field; and

a hierarchical data processing engine to update portions of the rendered form that

are out-of-date because of a change to the hierarchical data file caused by the data input

into the data-entry field.

74.   The user interface as defined in Claim 73, wherein the availability of one or more actions to the user concurs with an event elected from the group consisting of:

an association of the data-entry field on the rendered form with an input device;

a cursor position corresponding to the data-entry field on the rendered form with the input device;

the data-entry field on the rendered form is selected by the user by use of the input device;

the data-entry field on the rendered form is made to be an active field by operation of the input device;

specific conditions are met;

specific conditions are met with respect to data in the data-entry field on the rendered form;

when the user's mouse pointer for the input device rests over, within, or proximal to an editable region of the data-entry field on the rendered form;

when the user's mouse pointer for the input device rests over, within, or proximal to an editable region of the data-entry field on the rendered form and the mouse is clicked one or more times.

75.   The user interface as defined in Claim 73, wherein each said action is selected from the group consisting of:

displaying a menu containing one or more menu items with the rendered form;

displaying a toolbar containing one or more command tools with the rendered form;

selecting a menu item from a menu that is displayed with the rendered form;

selecting a command tool from a tool bar that is displayed with the rendered form;

an editing operation with respect to data in the data-entry field on the rendered form that is one or more of an undo function, a redo function, a copy function, a cut function, a paste function, an insertion of a hyperlink, and a carriage return or line feed function;

performing a character formatting operation with respect to data in the data-entry field on the rendered form that is one or more of a boldface, an italics, an underlining, a change of font size or font color, character spacing, and text effects; and

adding, entering, updating or deleting, with respect to the data-entry field in the rendered form, one or more of a repeating data-entry field, an optional data-entry field, a spreadsheet, a table, a row or a column in a table, a text box, multiple spaces, a header, a footer, an image, a graphic, a picture, a link to an image, a link to a graphic, a link to a picture, single line plain text, multi-line plain text, single line formatted text, multi-line formatted text, rich text, a whole number, a decimal, a true/false distinction, a date, and a time.

76. A user interface comprising:

a rendered form containing a plurality of data-entry fields respectively mapped to a plurality of nodes of a hierarchical XML data file having a schema that includes validation rules corresponding the plurality of nodes, wherein each said data-entry field

on the rendered form contains a display of an HTML representation of corresponding XML data in the hierarchical XML data file; and

an interface to enable a user to edit the XML data in the hierarchical XML data file using the corresponding data-entry fields of the rendered form, wherein:

the user can edit the XML data without the XML tags of the hierarchical XML data file being displayed on the rendered form; and

the editing of the XML data by the user is subject to the validation rules in the schema that correspond to the nodes of the hierarchical XML data file.

77.   The user interface as defined in Claim 76, wherein:

each said node has a corresponding attribute in the schema that defines an availability of one or more actions to the user when editing the XML data using the corresponding data-entry fields; and

the availability of the one or more actions to the user concurs with an association of an input device being used by the user with each said data-entry field.

78.   The user interface as defined in Claim 77, wherein the availability of one or more actions to the user concurs with an event elected from the group consisting of:

an association of the data-entry field on the rendered form with an input device;

a cursor position corresponding to the data-entry field on the rendered form with the input device;

the data-entry field on the rendered form is selected by the user by use of the input device;

the data-entry field on the rendered form is made to be an active field by operation of the input device;

specific conditions are met;

specific conditions are met with respect to data in the data-entry field on the rendered form;

when the user's mouse pointer for the input device rests over, within, or proximal to an editable region of the data-entry field on the rendered form;

when the user's mouse pointer for the input device rests over, within, or proximal to an editable region of the data-entry field on the rendered form and the mouse is clicked one or more times.

79.   The user interface as defined in Claim 77, wherein each said action is selected from the group consisting of:

displaying a menu containing one or more menu items with the rendered form;

displaying a toolbar containing one or more command tools with the rendered form;

selecting a menu item from a menu that is displayed with the rendered form;

selecting a command tool from a tool bar that is displayed with the rendered form;

an editing operation with respect to data in the data-entry field on the rendered form that is one or more of an undo function, a redo function, a copy

function, a cut function, a paste function, an insertion of a hyperlink, and a

carriage return or line feed function;

performing a character formatting operation with respect to data in the

data-entry field on the rendered form that is one or more of a boldface, an italics,

an underlining, a change of font size or font color, character spacing, and text

effects; and

adding, entering, updating or deleting, with respect to the data-entry field

in the rendered form, one or more of a repeating data-entry field, an optional data-

entry field, a spreadsheet, a table, a row or a column in a table, a text box,

multiple spaces, a header, a footer, an image, a graphic, a picture, a link to an

image, a link to a graphic, a link to a picture, single line plain text, multi-line plain

text, single line formatted text, multi-line formatted text, rich text, a whole

number, a decimal, a true/false distinction, a date, and a time.

80.   The user interface as defined in Claim 76, wherein, when the user edits

the hierarchical XML data file to change the hierarchical XML data file from an initial

version to a final version:

the editing is subject to the validation rules in the schema;

the initial version is different from the final version; and

the initial version and the final version both adhere to the schema due to the use of

the validation rules in the schema during the editing.

81.   The user interface as defined in Claim 76, further comprising a data

processing engine to update portions of the rendered form that are out-of-date because of

a change to the hierarchical data file caused by the user editing the XML data in the

hierarchical XML data file using the corresponding data-entry fields of the rendered

form.

82. The user interface as defined in Claim 77, wherein each said action is

selected from the group consisting of:

adding, entering, updating or deleting, with respect to the data-entry field in the

rendered form, one or more of:

a field in a block;

a list; and

an item in a list;

inserting or removing, with respect to the data-entry field in the rendered form, an

optional block; and

replacing, with respect to the data-entry field in the rendered form, an inserted

block with another block.

83. The user interface as defined in Claim 82, wherein the list is selected from

the group consisting of:

one or more tables;

one or more rows or columns in a table;

one or more text lists;

a one or more text items in a text list; and

one or more repeating blocks.